Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Texas

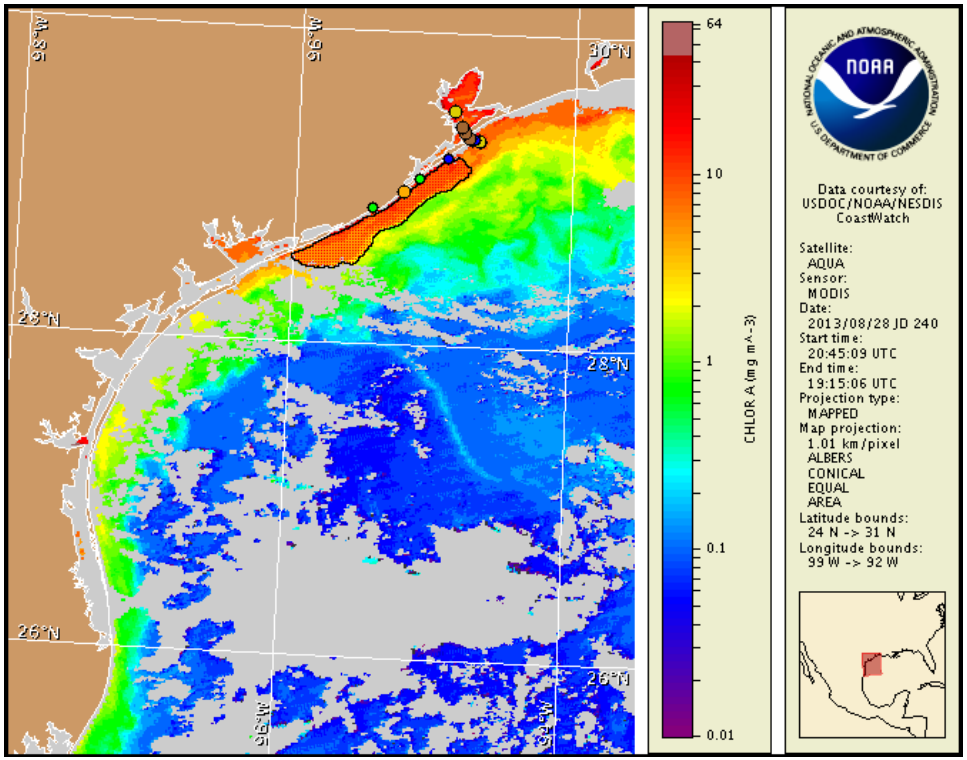
Thursday, 29 August 2013

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Monday, August 26, 2013



Satellite chlorophyll image with possible *K. brevis* HAB areas shown by red polygon(s), when applicable. Points represent cell concentration sampling data from August 19 to 28: red (high), orange (medium), yellow (low b), brown (low a), blue (very low b), purple (very low a), pink (present), and green (not present). Cell count data are provided by Texas Parks and Wildlife Department. For a list of sample providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:

http://tidesandcurrents.noaa.gov/hab/habfs_bulletin_guide.pdf

Detailed sample information can be obtained through the Texas Parks and Wildlife Department at:

http://www.tpwd.state.tx.us./landwater/water/environconcerns/hab/redtide/status.phtml

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To see previous bulletins and forecasts for other Harmful Algal Bloom Bulletin regions, visit the NOAA Harmful Algal Bloom Operational Forecast System bulletin archive:

http://tidesandcurrents.noaa.gov/hab/bulletins.html

Conditions Report

Not present to medium concentrations of *Karenia brevis* (commonly known as Texas red tide) are present along- and offshore Texas. *K. brevis* concentrations are patchy in nature and levels of respiratory irritation will vary locally based upon nearby bloom concentrations, ocean currents, and wind speed and direction. The highest level of potential respiratory irritation forecast for Thursday, August 29 to Tuesday, September 3 is listed below:

Region: Forecast (Duration)
Gulf Coast- Bolivar Peninsula: Moderate (Th-M), Very low (Tu)
Galveston Bay Region: Moderate (Th-Tu)
Gulf Coast- Galveston Island: Moderate (Th-M), Very low (Tu)
Gulf Coast- San Luis Pass to East Matagorda Bay Peninsula: Moderate (Th-M), Very low (Tu)

Check http://tidesandcurrents.noaa.gov/hab/beach_conditions.html for recent, local observations. Health information, from the Texas Department of State Health Services and other agencies, is available at http://tidesandcurrents.noaa.gov/hab/hab_health_info.html. Reports of respiratory irritation were received from the Galveston Island region and Surfside Beach yesterday.

There are currently patches of a bloom of the algae *Aureoumbra lagunensis* in the upper Laguna Madre region. This algae species does not produce the respiratory irritation associated with the Texas red tide caused by *Karenia brevis*, but it may cause discolored water and fish kills.

Analysis

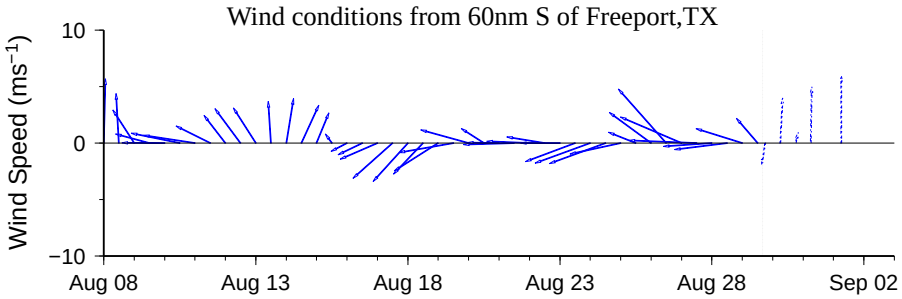
As of today, August 29, Texas bulletins will be issued twice weekly on Mondays & Thursdays due to current harmful algal bloom activity. Due to the upcoming Federal Holiday, the next bulletin will be issued on Tuesday, September 3.

A harmful algal bloom of *Karenia brevis* has been identified in the Bolivar Peninsula, Galveston, and San Luis Pass to East Matagorda Bay regions of Texas. In the San Luis Pass to East Matagorda Bay region, *K. brevis* concentrations range between not present and 'medium' with the highest concentration found at Surfside Beach (TPWD, 8/27-28). In the Galveston Island, Galveston Bay, and Bolivar Peninsula regions, *K. brevis* concentrations range between not present and 'low b' with the highest concentrations found at Houston Ship Channel Marker 47 and in Bolivar Roads Pass adjacent to the Galveston Yacht Basin (TPWD, 8/27-28).

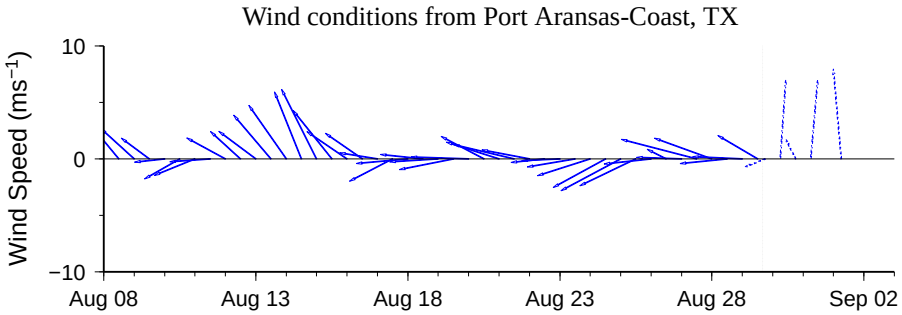
Recent MODIS Aqua imagery from 8/28 (shown left) is partially obscured by clouds along- and offshore the Texas coast. Elevated to very high chlorophyll concentrations (2->20 μg/L) are visible in patches alongshore extending up to 20km offshore from the Sabine Pass to Matagorda Pass regions, with patches of very high chlorophyll (>20 μg/L) extending south from the Surfside Beach region. Elevated chlorophyll is not necessarily indicative of the presence of *K. brevis* and could also be due to the resuspension of benthic chlorophyll and sediments along the coast. In situ sampling is necessary to confirm the presence of *K. brevis*.

Forecast models based on predicted near-surface currents indicate that the maximum bloom transport may be negligible (<10km) from coastal sample locations in the Surfside Beach region and the potential transport from the Port Aransas region would also be negligible (<10km) from August 28 to September 1.

Davis, Kavanaugh



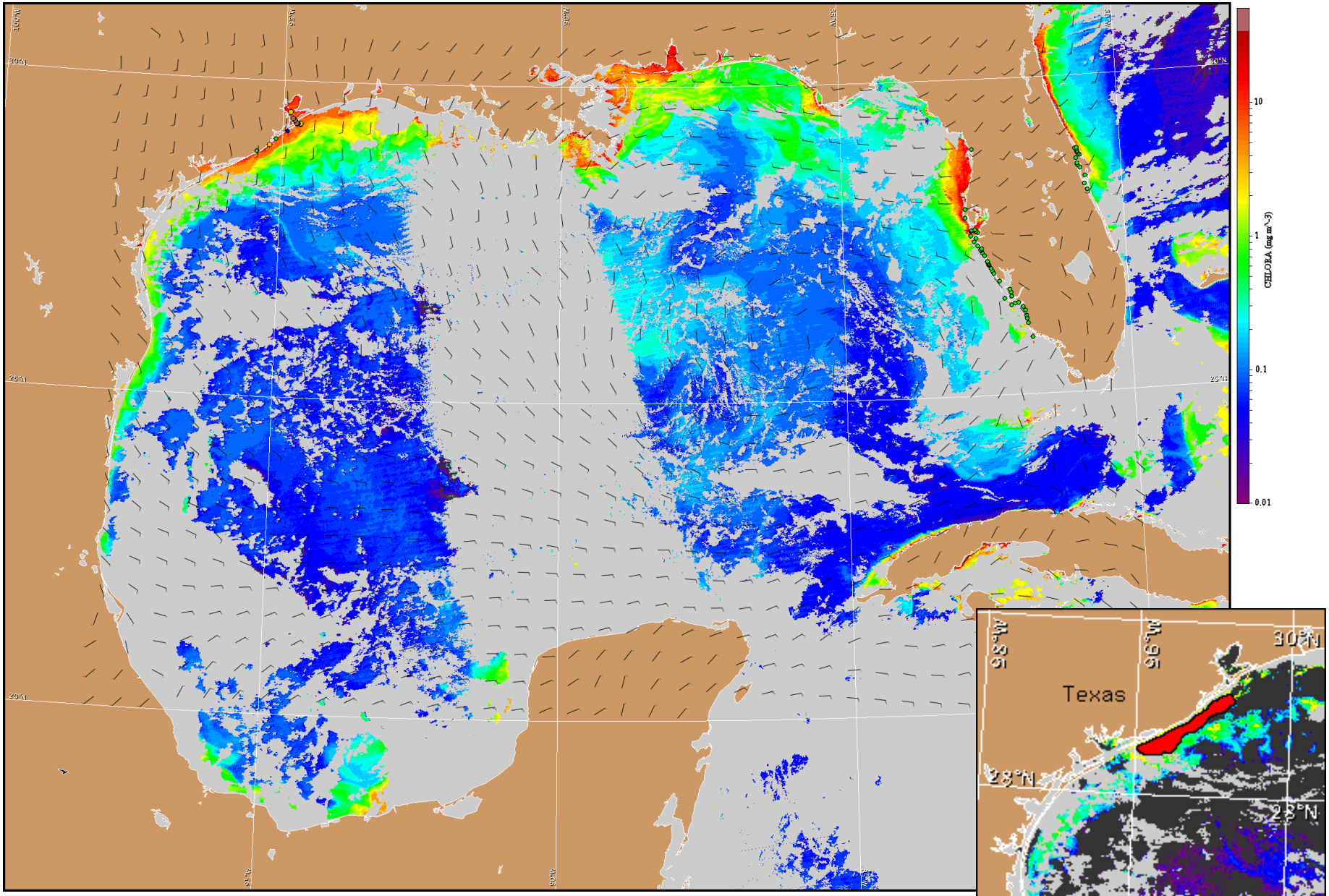
Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts. Wind observation and forecast data provided by NOAA's National Weather Service (NWS).



Wind Analysis

Galveston Island: Northwest winds (5kn, 3m/s) today becoming south in the afternoon. South winds (10kn, 5m/s) tonight. West winds (5kn) Friday becoming south in the afternoon. South winds (5-15kn, 3-8m/s) Friday night through Monday.

Port Aransas: Southeast winds (5-10kn, 3-5m/s) today becoming south winds (10-15kn, 5-8m/s) tonight. Southwest winds (5-10kn) Friday shifting to southeast winds in the afternoon. South winds (10-15kn) Friday night through Saturday. Southeast winds (10-15kn) Sunday through Monday.



Satellite chlorophyll image and forecast winds for August 30, 2013 06Z with points representing cell concentration sampling data from August 19 to 28: red (high), orange (medium), yellow (low b), brown (low a), blue (very low b), purple (very low a), pink (present), and green (not present). Cell count data are provided by Texas Parks and Wildlife Department. For a list of sample providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:

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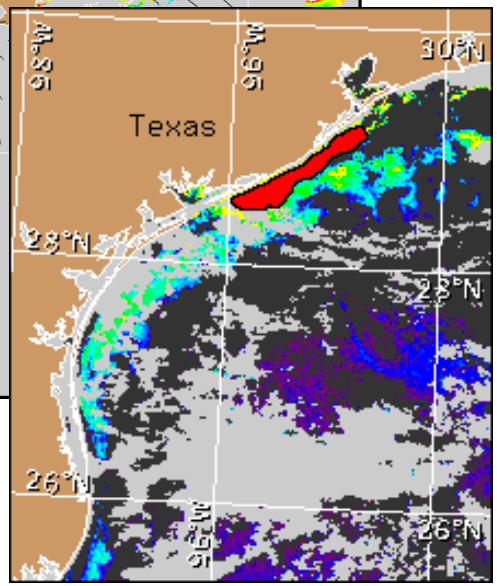

Verified and suspected HAB areas shown in red. Other areas of high chlorophyll concentration shown in yellow (see p. 1 analysis for interpretation).